



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,751	09/25/2003	Brent D. Zollinger	H0006231	9345
7590	05/20/2005		EXAMINER	
Ephraim Starr Division General Counsel Suite #200 23326 Hawthorne Boulevard Torrance, CA 90505			TRIEU, THAI BA	
			ART UNIT	PAPER NUMBER
			3748	
DATE MAILED: 05/20/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

6

<b>Office Action Summary</b>	<b>Application No.</b> 10/671,751	<b>Applicant(s)</b> ZOLLINGER ET AL.	
	<b>Examiner</b> Thai-Ba Trieu	<b>Art Unit</b> 3748	

**– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –  
Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 May 2005.  
2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1,3-5,9,12 and 13 is/are rejected.  
7) ☒ Claim(s) 2,6-8,10 and 11 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 25 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>05/02/2005</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

This Office action is in response to the Amendment filed on May 02, 2005. Applicant's cooperation in correcting the informalities in the drawing is appreciated. Applicant's cooperation in amending the claims to overcome the claim objections relating to informalities as well as indefinite claim language is also appreciated.

Applicant's arguments, see pages 9-11, filed May 02, 2005, with respect to the rejection(s) of claim(s) 1, 4, 9, and 12 under 35 U.S.C. § 103 as being allegedly unpatentable over Swearingen in view of Morrison are persuasive. Therefore, the rejection and the indicated allowable claims 2-3, 5-8, 10-11, and 13 have been withdrawn. However, upon further consideration, a new ground(s) of rejection is set forth below.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

***Claims 1, 3, 5, 9, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Arnold (Pub. Number US 2002/0094284 A1).***

Arnold discloses a variable geometry turbocharger assembly comprising:

a turbine housing (12) having an exhaust gas inlet (14) and an outlet (16), a volute connected to the inlet, and a nozzle wall adjacent the volute (See Figure 1, Page 2, Paragraph [0016]);

a turbine wheel carried within the turbine housing (12) and attached to a shaft (18); a plurality of vanes (22, 50) disposed within the turbine housing between the exhaust gas inlet and turbine wheel (the well-known components of a turbine) (See Figure 1), each vane comprising:

an inner airfoil surface (not Numbered) oriented adjacent the turbine wheel (See Figure 1);

an outer airfoil surface (Not Numbered) oriented opposite and parallel to the inner airfoil surface (See Figure 1);

first and second axial surfaces (56,58) each positioned perpendicular to and interposed between the inner and outer airfoil surfaces (See Figure 2);

a leading edge (60) positioned along a first inner and outer airfoil surface junction (See Figures 3-5);

a trailing edge (62) positioned along a second inner and outer airfoil surface junction (See Figures 3-5);

wherein each of the first and second axial surfaces (56, 58) comprises a composite construction of a solid section and a cored-out section (See Figures 3-5), wherein the solid section of one of the first and second axial surface occupies at least 25 percent of the axial surface area

extending from the leading edge (60) towards the trailing edge (62), and wherein the cored-out section (Not Numbered) for the same one of the first and second axial surface extends from the trailing edge (62) towards the leading edge (60) (See Figures 3-5, Pages 2-3, Paragraph [0022] - [0025]);

wherein each vane (22, 50) further comprises an opening (66) within at least one of the first and second axial surfaces (56, 58) for accommodating a post (68), and wherein the solid section extends from the leading edge (60) to the opening (66), and the cored-out section (Not Numbered) extends from the hole to a position adjacent the trailing edge (62) (See Figures 3-5);

a tab (64) projecting outwardly from the solid section and positioned adjacent the leading edge (60) (See Figures 3-5); and

an opening means (66) disposed through the second axial surface for accommodating a post (72) that is interposed between the vane and the nozzle wall (24) (See Figure 1).

***Claims 1, 4 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Gammill et al. (Patent Number 3,645,645).***

Gammill discloses a variable geometry turbocharger assembly comprising:

a turbine housing (35) having an exhaust gas inlet (34) and an outlet (21), a volute connected to the inlet, and a nozzle wall adjacent the volute (See Figure 1);

a turbine wheel (14) carried within the turbine housing (35) and attached to a shaft (12); a plurality of vanes (28) disposed within the turbine housing between the exhaust gas inlet and turbine wheel (14) (See Figure 1), each vane comprising:

an inner airfoil surface (not Numbered) oriented adjacent the turbine wheel (See Figure 1);

an outer airfoil surface (Not Numbered) oriented opposite and parallel to the inner airfoil surface (See Figure 1);

first and second axial surfaces (Not Numbered) each positioned perpendicular to and interposed between the inner and outer airfoil surfaces (See Figures 2-3);

a leading edge (42) positioned along a first inner and outer airfoil surface junction (See Figure 3);

a trailing edge (41) positioned along a second inner and outer airfoil surface junction (See Figure 3);

wherein each of the first and second axial surfaces (Not Numbered) comprises a composite construction of a solid section (Not Numbered) and a cored-out section (36) (See Figure 3), wherein the solid section of one of the first and second axial surface occupies at least 25 percent of

Art Unit: 3748

the axial surface area extending from the leading edge (42) towards the trailing edge (41), and wherein the cored-out section (36) for the same one of the first and second axial surface extends from the trailing edge (41) towards the leading edge (42) (See Figures 1-3, and Column 2, lines 24-40); and

wherein the solid section of the at least one of the first and second axial surfaces occupies at least 50 percent of the surface area of such axial surface as measured between the leading and trailing edges (See Figure 3).

#### ***Allowable Subject Matter***

Claims 2, 6-8, and 10-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

The IDS (PTO-1449) filed on May 02, 2005 has been considered. An initialized copy is attached hereto.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai-Ba Trieu whose telephone number is (571) 272-4867. The examiner can normally be reached on Monday - Thursday (6:30-5:00).

Art Unit: 3748

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TTB  
May 13, 2005



Thai-Ba Trieu  
Primary Examiner  
Art Unit 3748





REPLACEMENT SHEET

Approved for entry  
05/13/05  
TTB

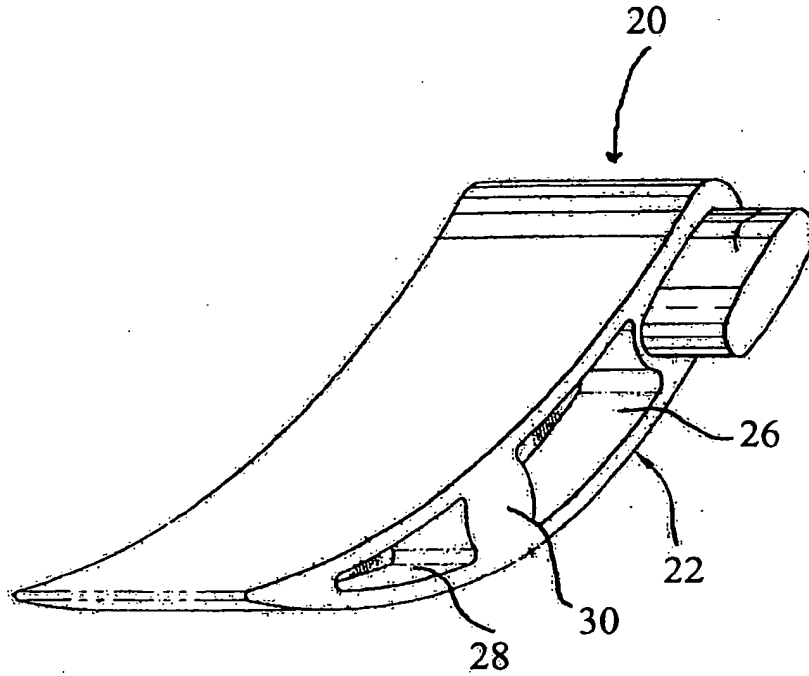


FIG. 2A PRIOR ART